

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claims 15-28 and 31-40 without prejudice or disclaimer in accordance with the following:

Claim 1 (Previously Presented): A reproducing apparatus for reproducing contents, the reproducing apparatus comprising:

- a storage unit which receives contents including interactive contents and audio visual (AV) contents from a storage medium and/or a distributed network;

- a control unit arranged to control reproduction of the interactive contents and AV contents, via a display device, the control unit comprising:

- a synchronized multimedia element determining unit, which parses and interprets interactive contents including multimedia elements, determines whether multimedia elements included in the interactive contents are synchronized with the AV contents; and

- an application program interface (API) transmitting unit, which transmits an API corresponding to an interactive control command input from a user to an AV contents reproducing engine that reproduces the AV contents and a synchronized multimedia element reproducing engine that reproduces the multimedia elements that are determined to be synchronized with the AV contents by the synchronized multimedia element determining unit, such that the multimedia elements are synchronized and mixed with the AV contents for a visual display on a screen of the display device.

Claim 2 (Previously Presented): The reproducing apparatus of claim 1, wherein the AV contents are digital versatile disk (DVD) contents and the interactive contents are expressed by a markup document and/or are resources referred to in the markup document.

Claim 3 (Previously Presented): The reproducing apparatus of claim 2, wherein the synchronized multimedia element determining unit parses and interprets the interactive contents that are expressed by the markup document including information about whether the multimedia elements are synchronized with the AV contents, and determines whether the multimedia elements included in the interactive contents are synchronized with the AV contents, and wherein the information included in the markup document to indicate whether the multimedia elements are synchronized with the AV contents are in forms of meta tags, newly defined tags, newly defined attributes, scripts, or binary data.

Claim 4 (Previously Presented): The reproducing apparatus of claim 3, wherein the synchronized multimedia element determining unit comprises:

an interactive contents parsing unit which parses the interactive contents that are expressed by the markup document and creates a document object model (DOM) tree; and
an interactive contents interpreting unit which interprets the DOM tree created by the interactive contents parsing unit and determines whether elements in each node of the created DOM tree are the multimedia elements that are synchronized with the AV contents.

Claim 5 (Previously Presented): The reproducing apparatus of claim 1, wherein the interactive control command input from the user represents a play command, a stop command, a previous screen view command, or a next screen view command, and the synchronized multimedia element reproducing engine represents a plug-in player.

Claim 6 (Previously Presented): The reproducing apparatus of claim 5, wherein the plug-in player represents a media player, a flash player, or a real player.

Claim 7 (Previously Presented): The reproducing apparatus of claim 6, wherein the multimedia elements include audio files, real moving picture files, and animation moving picture files that are reproduced in the media player, the flash player or the real player.

Claim 8 (Previously Presented): The reproducing apparatus of claim 7, wherein the API transmitting unit comprises:

an interactive control command receiving unit which receives the interactive control command input from the user that represents the play command, the stop command, the previous screen view command, or the next screen view command; and

an interactive control command corresponding API transmitting unit which transmits the API corresponding to the interactive control command received by the interactive control command receiving unit to the AV contents reproducing engine that reproduces the AV contents and the synchronized multimedia reproducing engine that reproduces the audio files, the real moving picture files, and the animation moving picture files that are determined by the synchronized multimedia element determining unit to be the multimedia elements synchronized with the AV contents.

Claim 9 (Previously Presented): A reproducing apparatus for reproducing interactive contents, the reproducing apparatus comprising:

a contents reading unit which reads AV/interactive contents including audio visual (AV) contents and interactive contents from a storage medium and/or a distributed network; and

a control unit arranged to control reproduction of the interactive contents and AV contents, via a display device, the control unit comprising:

an interactive contents synchronizing unit which determines whether multimedia elements included in the interactive contents are synchronized with the AV contents and transmits an application program interface (API) corresponding to an interactive control command;

an AV contents reproducing engine which receives the API transmitted from the interactive contents synchronizing unit and reproduces the AV contents according to the received API; and

a synchronized multimedia element reproducing engine which receives the API transmitted from the interactive contents synchronizing unit and reproduces the multimedia elements that are determined to be synchronized with the AV contents by the interactive contents synchronizing unit, such that the multimedia elements are synchronized and mixed with the AV contents for a visual display on a screen of the display device.

Claim 10 (Previously Presented): The reproducing apparatus of claim 9, wherein the

storage medium represents a DVD read-only-memory (DVD-ROM) or a compact disk ROM (CD-ROM), and the distributed network represents the Internet.

Claim 11 (Previously Presented): The reproducing apparatus of claim 10, wherein the interactive contents synchronizing unit parses the interactive contents included in the AV/interactive contents read by the contents reading unit.

Claim 12 (Previously Presented): The reproducing apparatus of claim 10, further comprising a contents buffer which buffers the AV/interactive contents read by the contents reading unit.

Claim 13 (Previously Presented): The reproducing apparatus of claim 12, wherein the interactive contents synchronizing unit parses and interprets the interactive contents included in the AV/interactive contents buffered by the contents buffer and determines whether the multimedia elements included in the interactive contents are synchronized with the AV contents.

Claim 14 (Previously Presented): The reproducing apparatus of claim 9, further comprising a non-synchronized multimedia element reproducing engine which reproduces the multimedia elements that are determined by the interactive contents synchronizing unit not to be synchronized with the AV contents.

Claim 15-28 (Canceled):

Claim 29 (Previously Presented): A computer readable recording medium having embodied thereon a program which, when executed by a processor of a reproducing apparatus, causes the apparatus to perform a method of synchronizing interactive contents, the method comprising:

receiving contents including interactive contents and audio visual (AV) contents from one of a storage medium and a distributed network;

parsing and interpreting the interactive contents, and determining whether multimedia elements included in the interactive contents are synchronized with audio visual (AV) contents;
and

transmitting an application program interface (API) corresponding to an interactive control command to an AV contents reproducing engine that reproduces the AV contents and a synchronized multimedia element reproducing engine that reproduces the multimedia elements that are determined to be synchronized with the AV contents, such that the multimedia elements are synchronized and mixed with the AV contents for a visual display on a screen of a display device.

Claim 30 (Previously Presented): A computer readable recording medium having embodied thereon a program which, when executed by a processor of a reproducing apparatus, causes the apparatus to perform a method of synchronizing and reproducing interactive contents, the method comprising:

receiving AV/interactive contents including interactive contents and audio visual (AV) contents from a storage medium and/or a distributed network;

determining whether multimedia elements included in the interactive contents are synchronized with the AV contents and transmitting an application program interface (API) corresponding an interactive control command;

receiving the transmitted API and reproducing the AV contents, via an AV contents reproducing engine, according to the received API; and

receiving the transmitted API and reproducing multimedia elements, via a synchronized multimedia reproducing engine, that are determined to be synchronized with the AV contents, such that the multimedia elements are synchronized and mixed with the AV contents for a visual display on a screen of a display device.

Claim 31-40 (Canceled):